

NAME:

DATE:

Build a Lung!

What happens when you breathe? Place your hands on your ribs and inhale slowly. Do you feel your chest expand? In this activity, you will build a model of a lung using some common materials. You will see how the diaphragm muscle works to inflate your lungs.

Materials

- top half of a 2 L plastic bottle
- 1 small balloon
- plastic drinking straw
- small plastic trash bag, cut into circle
- 2 rubber bands
- tape

Procedure

1. Attach the balloon to the end of the straw with tape.
2. Insert the balloon end of the straw into the neck of the bottle until the balloon is approximately 3-4 centimetres below the bottle's mouth. Use tape to attach the straw to the mouth of the bottle AND to seal the mouth of the bottle entirely.
3. Take the piece of trash bag and pinch a small amount in the middle. Wrap tape or an elastic band around the part that is pinched.
4. Turn the bottle gently on its side. Place the trash bag over the cut end of the bottle, making sure that the pinched out part is on the outside of the bottle. Expand a rubber band around the bottom of the bottle to secure the plastic over the end. You may wish to tape the excess plastic to the side of the bottle.

Analysis Questions

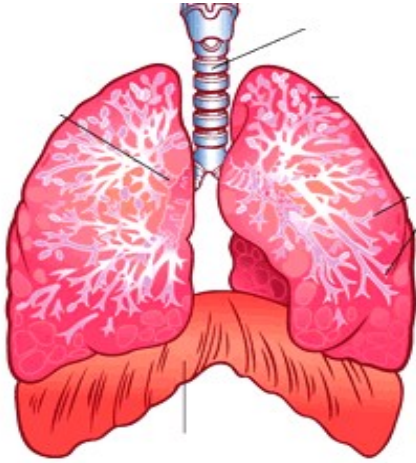
1. What can you do with your model to make the "lung" inflate? Try to come up with a reason for why this happens.

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2. What do you think the balloon, the plastic and the straw represent in your model? Draw a diagram of your model below beside the diagram of the human lung and use arrows to link the similar representations. Label all parts that you can.

Human Lung



Your Lung Model